

Heat resistant laminated board for printed circuits - has surface layer of thermoset resin impregnated glass fibre cloth contg. inorganic filler and middle layer of thermoset resin impregnated cloth contg. inorganic filler

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Patent Family:

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Abstract (Basic): JP 5261870 A

The board comprises a surface layer comprising a thermoset resin impregnated glass fibre cloth contg. inorganic filler in the amt. of 10-20 wt.% based on the resin in the surface layer and a middle layer comprising a thermoset resin impregnated nonwoven cloth contg. inorganic filler in the amt. of 10-200 wt.% based on the resin in the middle layer.

USE/ADVANTAGE - The board has improved tracking resistance, heat resistance, Cu foil peeling strength and surface flatness, so is used for industrial electric, electronic and telecommunication equipment.

In an example, 100 pts. wt. of a varnish comprising 100 pts. wt. of brominated epoxy resin, 4 pts. wt. of dicyandiamide, 0.15 pts. wt. of 2-ethyl-4-methylimidazole, 36 pts. wt. of methylcellosolve and 60 pts. wt. of acetone, 50 pts. wt. of gibbsite type Al hydroxide and 2 pts. wt. of super fine silica were mixed and applied to a glass cloth so that the resin content is 30-40 wt.%. While 100 pts. wt. of the varnish and 25 pts. wt. of silica, 70 pts. wt. of gibbsite type Al hydroxide and 5 pts. wt. of super fine silica were mixed and applied to a glass nonwoven cloth so that the resin and filler content is 90 wt.%. The glass cloth prepreg was put on the both side of the nonwoven glass cloth prepreg as a core and a Cu foil was put on the both side and pressed at 165 deg.C and 60 kgf/cm<sup>2</sup> for 90 minutes to prepare a Cu foil laminated board 1.6 mm thick, which showed tracking resistance of 600 V, solder resistance of 180 sec. at 280 deg.C and Cu foil peeling strength of 1.6 KN/m.

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Title Terms: HEAT; RESISTANCE; LAMINATE; BOARD; PRINT; CIRCUIT; SURFACE; LAYER; THERMOSETTING; RESIN; IMPREGNATE; GLASS; FIBRE; CLOTH; CONTAIN; INORGANIC; FILL; MIDDLE; LAYER; THERMOSETTING; RESIN; IMPREGNATE; CLOTH; CONTAIN; INORGANIC; FILL

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